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**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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SK

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
|-----------------|-------------|----------------------|---------------------|

09/295,273 04/20/99 SUMITOMO

N 2927-0103F

002292 QM12/0711
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EXAMINER

VARMA, S

ART UNIT

PAPER NUMBER

3711

DATE MAILED:

07/11/00

S

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/295,273

Applicant

Sumitomo et al.

Examiner

Sneh Varma

Group Art Unit

3711



Responsive to communication(s) filed on _____

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

Claim(s) 1-9 _____ is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-9 _____ is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

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DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been placed in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kawamatsu '573 (Kawamatsu).

Kawamatsu discloses a golf club shaft (Figure 1-12; Column 2, lines 37-50) having a plurality of fiber reinforced resinous layers 6a and 6b, which are layered one upon another in a winding state, wherein one or more layers of the layers 6a and 6b, (Figure 2) are inclined fiber reinforced resinous layers in which reinforcing fibers are oriented at angles not 0° and 90° with respect to an axis of the golf club shaft 1, (Figures 1-4) and, at least one layer of the inclined fiber reinforced resinous layers is wound by an unintegral turns more than one turn (see 6a and 6b, Figure 4) so as to apply an anisotropic property to the shaft (see H on layers 6a and 6b, Figure 2;

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Column 2, lines 39-48). Kawamatsu discloses the same structure as claimed, therefore it has the same properties as claimed.

Regarding Claims 1-4, layers 6a and 6b meet the limitation of the claims (Figures 1-12;) showing unintegral turns of the fiber reinforced resinous layers wound by more than one turn is $N+0.5$, where N is an integer more than 1 (Figure 4) and the first fiber reinforced resinous layer and the second fiber reinforced resinous layer are bonded to form one prepreg sheet (Column 2, lines 37-45)

Regarding Claim 3, Kawamatsu discloses that the inclined fiber reinforced resinous layers are a first inclined fiber reinforced resinous layer in which reinforcing fibers are oriented at an angle of +Alpha degree (Figure 2; Column 3, lines 25-36) with respect to an axis of the golf club shaft and a second inclined fiber reinforced resinous layer in which reinforcing fibers are oriented at an angle of - Alpha degree with respect thereto, and the second inclined fiber reinforced resinous layer is adjacently layered on the first inclined fiber reinforced resinous layer in a winding state at one portion, or more, and a winding start position of the first inclined fiber reinforced resinous layer and a winding start position of the second inclined fiber reinforced resinous layer are spaced at 180° (Column 3, lines 53-55) in a circumferential direction of the golf club shaft; and the first inclined fiber reinforced resinous layer and the second inclined fiber reinforced resinous layer are wound by $N+0.5$ turns, respectively where N is an integer more than one (Figure 4).

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Regarding Claims 5-7, Kawamatsu discloses the structure wherein a part of the inclined fiber resinous layer corresponding to decimal turns obtained by substracting integral turns from the unintegral turns forms an anisotropic region and an angle of the reinforcing fiber of the anisotropic region is different from that of other region in a circumferential direction of the shaft. The same anisotropic property is applied to the Kawamatsu shaft by the anisotropic region, as claimed by the inventor, so that the shaft is twisted by a flexure thereof when the shaft is swung.

Regarding Claims 8-9, Kawamatsu discloses that one or more of the fiber reinforced resinous layers 6c or 6d, have reinforcing fiber whose orientation angle is 90⁰ and/or 0⁰ with respect to the axis of the shaft and that the fiber reinforced resinous layers are composed of prepreg sheets (Column 2, lines 42-45).

Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lo (U. S. Patent 5,380,389) discloses a method for manufacturing the shaft unit of a golf club.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Varma whose telephone number is (703) 308-8335. The examiner can normally be reached on Monday to Friday from 8:00 A.M. - 4:30 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Jeanette Chapman, can be reached on (703) 308-1310.

The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7768.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1078.

July 5, 2000

Sneh Varma, Patent Examiner

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JEANETTE CHAPMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700